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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/476,776	12/30/1999	TETSUHIRO SHIOMI	SON-1688	8293

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EXAMINER

CHU, KIM KWOK

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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06/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/476,776

Applicant(s)

SHIOMI ET AL.

Examiner

Kim-Kwok CHU

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on April 3, 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 and 15-20 is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5 and 8-10 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 6, 7, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 12/30/1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Remarks

1. Applicant's Remarks and Amendment filed on April 30, 2007 have been fully considered but it is not persuasive.

With respect to the rejected Claims 1, 4, 5 and 8-10, Applicant states that the prior art of Kamiya (U.S. Patent 5,001,690) fails to teach or suggest "a spindle chassis for rotationally supporting a turntable on which an optical diskis placed" (page 8 of the Remarks, last paragraph). Especially, Applicant argues that the prior art of Kamiya's disk motor 11 (Fig. 1) is not a chassis (page 8 of the Remarks, last paragraph, line 3). Accordingly, a chassis is a framework to which components of electronic equipment are attached. A spindle chassis therefore is a framework where a spindle such as a motor is attached. Similarly, the prior art of Kamiya's motor drive assembly 11 can be considered as a spindle chassis because it is a framework/structure where a spindle motor 11 is attached. In Kamiya's Figs. 1, 10 and 12, although the motor assembly 11 and its attached framework is not fully illustrated, it is inherently known that Kamiya's disc drive unit including all the electrical components as illustrated in Fig. 1 are attached to a chassis/framework which is used as a supporting base structure.

Applicant also states that his chassis rotationally supports the turntable, i.e. it allows the table to rotate

(page 8 of the Remarks, last two lines). Accordingly, the prior art of Kamiya teaches a turntable 13 which is used to spin a disc 10. In other words Kamiya's spindle chassis 11 supports a turntable 13 and allows the turntable 13 to rotate freely.

Furthermore, Applicant states that the prior art of Kamiya's head base 24 and the optical pickup 12 are supported by the subbase 26 (page 9 of the Remarks, lines 3 and 4) and therefore Kamiya fails to teach or suggest that first, the subbase 26 is in any way supported by the spindle motor 11 and second, the spindle motor 11 is mounted on the head base 24 (page 9 of the Remarks, first paragraph). Accordingly, with respect to the prior art of Kamiya's Fig. 10, a pickup chassis 12 is supported by the pivotable subbase 26 (Fig. 5; column 2, lines 1-9). Since the subbase 26 is also supported/structured by the chassis where the spindle motor 11 is attached, it can be considered that the prior art of Kamiya's pickup chassis 12 is rotationally/pivotable supported on the spindle/motor chassis 11.

As a whole, in Kamiya's Figs. 1, 5 10, 12 and 13a, although the motor assembly 11, the pickup assembly 12 and their supporting means 24, 25, and 26 are not fully illustrated, it is inherently known that Kamiya's disc drive unit including all the electrical components such as the

spindle motor 11 and the pickup up 12 attached to a main chassis which includes spindle chassis 11 and pickup chassis 24, 25 and 26.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

3. Claims 1, 4, 5 and 8-10 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kamiya et al. (U.S. Patent 5,001,690).

4. Kamiya teaches a disk recording and/or reproducing apparatus having as all of the elements and means as recited in claims 1, 4 and 5. For example, Kamiya teaches the following:

(a) with respect to Claim 1, a spindle chassis (motor base) 11 for rotationally supporting a turntable 13 on which an optical disk 10, to/from which information is recorded and/or reproduced, is placed (Fig. 1; spindle motor 11 is part of a spindle chassis/base); a pickup chassis (pickup supporting/pivotable assembly) 24/26 rotationally supported on

the spindle chassis 11 (Fig. 13a), for movably supporting an optical pickup device 12 for writing and/or reading the information to/from the optical disk and being movable toward and away from the turntable (Figs. 13b and 13c); and a tilt mechanism 50, 59, 60 for adjusting tilt angle of the optical pickup device 12 with respect to the optical disk 10 by rotating the pickup chassis 24 with respect to the spindle chassis 11 (Fig. 1; tilt motor 50 is rotated and the optical pickup 12 is being tilted with respect to the stationary spindle chassis 11), the tilt mechanism 50, 59 comprising: a stepping motor 50 for rotating the pickup chassis 24 with respect to the spindle chassis 11 (Fig. 1; motor 50 is a stepping motor because it is pulse controlled); and a control circuit 46, 48 for driving the stepping motor 50 to set tilt angle at a predetermined neutral position without a tilt sensor (Figs. 1 and 5; column 4, lines 20-40).

(b) with respect to Claim 4, the predetermined neutral position is indicative of a middle position between a tilt minimum position and a tilt maximum position (Figs. 13a and 15e; column 5, lines 51-56).

(c) with respect to Claim 5, the predetermined neutral position is indicative of a position at which an optical disk having no warp is reproduced most preferably (Fig. 13a; inherent feature where a good disk has no tilt and therefore

the received/detected signal can be used as a reference of disk tilting).

5. Claims 8-10 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. Claim 8 however also recites the following amended limitations which are also taught by the prior art of Kamiya:

(a) the first chassis assembly (attached to 11) for rotationally supporting a recording medium 10 driving means 11 and the second chassis 24-26 for supporting a head device 12 for writing and/or reading information to/from the recording medium 10 (Fig. 1, 5, 10 and 12).

Allowable Subject Matter

6. Claims 2, 3, 6, 7, 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 13 and 15-20 are allowable over prior art.

8. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claim 2, the prior art of record fails to teach or fairly suggest a recording/reproducing apparatus having a control circuit with no tilt sensor input for driving a stepping motor to obtain a reference position by causing a loss of synchronism.

As in claim 11, the prior art of record fails to teach or fairly suggest a apparatus for adjusting the tilt angle of an optical pickup device wherein the tilt drive mechanism has a cam having a portion mechanically engaged with the stepper motor and a spiral surface mechanically engaged with the second chassis assembly.

As in claim 13, the prior art of record fails to teach or fairly suggest a method of adjusting the tilt angle of an optical pickup device wherein the predetermined reference

position coincides with a loss of synchronism between an electrically induced magnetic field in the drive unit and a mechanical magnetic field in the drive unit.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington, can be reached on (571) 272-4483.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

Kim-Kwok CHU

Examiner AU2627

June 12, 2007

(571) 272-7585


ANDREA WELLINGTON
SUPERVISORY PATENT EXAMINER